

HAMPTONS SIGN

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Professor cum Vice Principal, Chitra College of Nursing, M. C Road, Pandalam, Kerala, India.*DOI: <http://doi.org/10.47211/tg.2022.v09i01.002>ABSTRACT:**

Hampton's hump, also called sign, is a radiologic sign which consists of a shallow wedge-shaped opacity in the periphery of the lung with its base against the pleural surface. It is named after Aubrey Otis Hampton, who first described it in 1940. A juxta-pleural pulmonary soft tissue density on a chest radiograph, convex toward the hilum, usually at the costophrenic angle; described as a manifestation of pulmonary infarction, due to pulmonary embolism. In most cases, pulmonary embolism is caused by a blood clot in the leg that breaks loose and travels to the lungs. A blood clot in a vein close to the skin is not likely to cause problems. But having blood clots in deep veins (deep vein thrombosis) can lead to pulmonary embolism. More than 300,000 people each year have deep vein thrombosis or a pulmonary embolism. Other things can block an artery, such as tumors, air bubbles, amniotic fluid, or fat that is released into the blood vessels when a bone is broken. But these are rare and uncommon.

Key words: Hampton's hump, radiologic sign, pulmonary embolism.

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INTRODUCTION:

Hampton's sign, also called Hampton hump, is a radiologic sign which consists of a shallow wedge-shaped opacity in the periphery of the lung with its base against the pleural surface.^[1] It is named after Aubrey Otis Hampton, who first described it in 1940. A juxta-pleural pulmonary soft tissue density on a chest radiograph, convex toward the hilum, usually at the costophrenic angle; described as a manifestation of pulmonary infarction, due to pulmonary embolism.

Definition:

Hampton's hump, also called Hampton hump, is a radiologic sign which consists of a shallow wedge-shaped opacity in the periphery of the lung with its base against the pleural surface. It is named after Aubrey Otis Hampton, who first described it in 1940.

Incidence:

The Incidence of Hamptons hump is 69/100,000 and 10% of patients with pulmonary embolism die within 1 hour of the event. Clinically suspected pulmonary embolism in more than 5,75,000 people in the US.

Etiology:

In most cases, pulmonary embolism is caused by a blood clot in the leg that breaks loose and travels to the lungs. A blood clot in a vein close to the skin is not likely to cause problems. But having blood clots in deep veins (deep vein thrombosis) can lead to pulmonary embolism. More than 300,000 people each year have deep vein thrombosis or a pulmonary embolism.¹

Other things can block an artery, such as tumors, air bubbles, amniotic fluid, or fat that is released into the blood vessels when a bone is broken. But these are rare.

What increases your risk of pulmonary embolism?

Anything that makes you more likely to form blood clots increases your risk of pulmonary embolism. Some people are born with blood that clots too quickly. Other things that can increase your risk include:

- Being inactive for long periods. This can happen when you have to stay in bed after surgery or a serious illness, or when you sit for a long time on a flight or car trip.
- Recent surgery that involved the legs, hips, belly, or brain.
- Some diseases, such as cancer, heart failure, stroke, or a severe infection.
- Pregnancy and childbirth (especially if you had a cesarean section).
- Taking birth control pills or hormone therapy.
- Smoking.

Signs and Symptoms:

Symptoms of a pulmonary embolism depend on the size of the clot and where it lodges in the lung.

The most common symptom of a pulmonary embolism is shortness of breath. This may be gradual or sudden.

Other symptoms of a pulmonary embolism include:

- anxiety
- clammy or bluish skin
- chest pain that may extend into your arm, jaw, neck, and shoulder
- fainting
- irregular heartbeat
- rapid breathing
- rapid heartbeat
- restlessness
- spitting up blood

Diagnostic Evaluation:

The most common diagnostic values for pulmonary embolism are listed out and they are

- Chest X-ray: This standard, noninvasive test allows doctors to see your heart and lungs in detail, as well as any problems with the bones around your lungs.
- Electrocardiography (ECG): This test measures your heart's electrical activity.
- MRI: This scan uses radio waves and a magnetic field to produce detailed images.
- CT scan: This scan gives your doctor the ability to see cross-sectional images of your lungs. A special scan called a V/Q scan may be ordered.

- Pulmonary angiography: This test involves making a small incision so your doctor can guide specialized tools through your veins. Your doctor will inject a special dye so that the blood vessels of the lung can be seen.
- Duplex venous ultrasound: This test uses radio waves to visualize the flow of blood and to check for blood clots in your legs.
- Venography: This is a specialized X-ray of the veins of your legs.
- Specific blood test known as the D-dimer test.

Treatment:

The treatment which is used for pulmonary embolism are been enlisted as follows and they are

Medical Management:

☑ Anticoagulants: Also called blood thinners, the drugs heparin and warfarin prevent new clots from forming in your blood. They can save your life in an emergency situation.

☑ Clot dissolvers (thrombolytics): These drugs speed up the breakdown of a clot. They're typically reserved for emergency situations because side effects may include dangerous bleeding problems.

Surgical Management:

- **Vein filter:** The doctor will make a small incision, and then use a thin wire to install a small filter in inferior vena cava. The vena cava is the main vein that leads from your legs to the right side of your heart. The filter prevents blood clots from traveling from your legs to your lungs.
- **Clot removal:** A thin tube called a catheter will suction large clots out of your artery. It isn't an entirely effective method because of the difficulty involved, so it's not always a preferred method of treatment.
- **Open surgery:** Doctors use open surgery only in emergency situations when a person is in shock or medications aren't working to break up the clot.

Follow Up Care:

Follow up plays a vital role in Hamptons Sign and they are been in regular intervals with continuous monitoring.

- ✓ Advice the patient to take regular medications as prescribed.
- ✓ Advice the patient to use compression stockings (they are similar to really tight socks) or another device to prevent clots from forming in your legs.
- ✓ Whenever possible, only minimal sedation, if any, should be used as a way to keep patients more active.
- ✓ Neuromuscular blocking agents should be avoided because they've been linked to DVT. Use of sedation scales may provide a more consistent approach to sedation dosing, as might sedation and analgesia protocols.
- ✓ Implementing and maintaining prophylactic measures as a standard practice for preventing DVT are essential. Protocols for ventilator management and weaning also may be crucial to restoring activity levels and liberating patients from mechanical ventilation.
- ✓ Make sure you're familiar with DVT and PE risk factors and signs and symptoms. Be aware that when PE is confirmed or strongly suspected, treatment must begin immediately.
- ✓ Be sure to monitor patients for pain, anxiety, and anticoagulant side effects (such as bleeding), and provide appropriate interventions.

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